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| **NWS FORM E-5** (11-88) (PRES. BY WSOM E-41)<br>**U.S. DEPARTMENT OF COMMERCE**<br>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION<br>NATIONAL WEATHER SERVICE | HYDROLOGIC SERVICE AREA (HSA)<br>**WFO Jackson, Mississippi** |
| **MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS** | REPORT FOR:<br>MONTH: **May** YEAR: **2003** |
| TO: Hydrometeorological Information Center, W/OH2<br>NOAA / National Weather Service<br>1325 East West Highway, Room 7230<br>Silver Spring, MD 20910-3283 | SIGNATURE<br>**Alan Gerard, MIC**<br>**In Charge of HSA**<br>DATE<br>**June 11th , 2003** |

*When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (WSOM E-41)*

***Synopsis...***

***The month of May was a battle of the air masses. A series of frontal systems progressed into the HSA and either slowed or stalled. Severe weather accompanied some of these as they moved through, especially during the first half to two-thirds of the month.***

***A cold front pushed into the HSA around the first of the month and became stationary on the 3rd. As the front began to push north as a warm front, some severe weather and isolated heavy rainfall occurred mainly over central and northern sections of the area. Rainfall amounts ranged from .25 to near 2.50 inches. The heaviest rainfall occurred at Winona, MS (2.32 inches).***

***The most significant event of the month was produced by a thunderstorm induced outflow boundary which pushed into the northern portion of the HSA on the 5th . This boundary pushed into moist unstable air already in place. Thunderstorms fired up over our northern HSA counties, dumping heavy rainfall which produced some small stream flooding. Rainfall amounts from the 5th into the 6th ranged from 1 to near 4 inches. The heaviest rainfall occurred at Grenada, MS (3.83 inches). Another outflow boundary pushed into northern Louisiana and portions of central Mississippi early on the 7th. Rainfall amounts over this area ranged from .25 to near 2.25 inches in northeast Louisiana. A weak cold front finally pushed through the area on the 11th bringing with it some much needed relief from high humidity. Rainfall amounts mainly over central areas were 1 to 1.50 inches.***

***From the 13th into the 15th, a warm front surged north and became stationary over north Louisiana and central Mississippi. Several rainfall events occurred during this time period. Rainfall amounts during this period were from .50 inches to near 3 inches.***

***A squall line ahead of an advancing cold front pushed through the entire HSA from the 17th into the 18th. Rainfall amounts ranged from .75 to 2.25 inches. Another, yet weaker, cold front pushed through the HSA from the 20th into the 21st. Rainfall amounts ranged from .10 to near 1.00 inch.***

***A cold front moved through from the 25th to 27th slowing as it moved into***

*southern sections of the HSA. Rainfall amounts ranged from .25 to around 1.25 inches of rainfall. Drier and cooler air covered the state until the end of the month.*

***River and Soil Conditions...***

*Soil moisture conditions began the month near normal. Soil moisture conditions during the month remained near normal with the exception of extreme southern portions of northeast Louisiana and extreme southwest Mississippi in the JAN HSA where soil moisture was below normal. Soils in the Tombigbee and the upper Chickasawhay were above normal.*

*Only minor flooding was reported during the month. Flooding was reported on the upper Big Black River, upper Pearl, Big Sunflower, and the Lower Mississippi River. See the March E-3 report for specific information on flood crests.*

*With near normal rainfall and above normal temperatures forecast for the next few months, flood potential for HSA rivers should remain near normal or slightly below normal for the next 60 to 90 days.*

*Rainfall for the month of May...*

| RIVER BASIN | RAINFALL | DEPARTURE FROM NORMS |
|---|---|---|
| Southeast Arkansas (Chicot & Ashley counties) | 2.75 to 5.50 inches | Much Below in Chicot and east Ashley to near normal in west Ashley. |
| Northeast Louisiana (Tensas, Boeuf, Bayou Macon & Lower Ouachita) | 2.00 to 5.75 inches northern sections<br><br>4.25 to 8.00 inches central sections<br><br>1.00 to 4.25 inches southern section | Much below east sections to near normal west sections.<br><br>Below normal to much above normal in north central sections.<br><br>Below to much below normal. |
| Lower Yazoo | 2.25 to 11.00 inches | Normal to above normal from Bolivar county to Grenada county. Much below normal from Washington to Humphreys to Holmes and Yazoo counties. Normal to much above normal from Sharkey to Warren counties. |

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| *Big Black* | *4.00 to 7.50 inches upper basin*<br><br>*3.00 to 5.25 inches middle basin*<br><br>*6.00 to 7.25 inches lower basin* | *Below southern sections to much above normal over northern sections.*<br><br>*Much below to near normal.*<br><br>*Much above normal.* |
| *Homochitto/ Bayou Pierre* | *2.50 to 5.00 inches* | *Much below normal to near normal.* |
| *Pearl(abv Jackson)* | *4.00 to 5.50 inches* | *Below in northeast basin to near normal just above Jackson.* |
| *Pearl(Blo Jackson)* | *2.00 to 5.00 inches* | *Much below to near normal.* |
| *Pascagoula* | *1.50 to 5.75 inches over the Leaf basin.*<br><br>*3.00 to 4.25 inches over the Black Creek basin.*<br><br>*3.50 to 6.00 inches over the Chickasawhay* | *Much below normal except for middle portions of Tallahala Creek basin which was slightly above normal.*<br><br>*Below to much below normal.*<br><br>*Much below to just above normal.* |
| *Tombigbee tributaries in the JAN HSA* | *4.00 to 7.50 inches* | *Near Normal to Much above normal.* |

*The heaviest rainfall amounts in the HSA for the month were: 11.04 inches at Grenada, MS; 8.02 inches at Tallulah, LA; 7.64 inches at Jackson State University, MS; 7.44 inches at Winona, MS; 7.41 inches at Tibbee, MS; 7.19 inches at Vicksburg, MS. Some of the lowest reporting stations in the HSA were at Red River Lock & Dam #1, LA, .85 inches; 1.40 inches at Paulding, MS; 1.87 inches at Sumrall, MS; 2.22 inches at Leland, MS; 2.41 inches at White Oak, MS; and 2.54 inches at Raleigh, MS.*

*Here at the Jackson WFO, the May monthly rainfall was 4.57 inches, which was 0.29 inches below normal. We have receieved 30.94 inches of rainfall through the end of May which was 4.19 inches above normal.*

*At the Meridian Airport, the May monthly rainfall was 3.95 inches, which was 0.92 inches above normal. Meridian has received 26.28 inches through the end of May which was 2.41 inches below normal.*

***Mississippi River...***

*Heavy rainfall over the Ohio and Tennessee Valleys during the early part of May caused the Lower Mississippi to experience flooding. Many thousands of*

*acres of crops within and outside the levee system from Arkansas City to Natchez were flooded. For the first quarter to half of the month the river was below seasonal normals; however, as the flood crest from Cairo, Ill progressed south, the river pushed well above seasonal norms by months end. The river from Arkansas to Natchez either reached or surpassed flood stage. See E-3 report for crest data.*

*The provisional high and low stages for May are listed below:*

| Location | High Stage(ft) | Date | Low Stage(ft) | Date |
|---|---|---|---|---|
| Arkansas City, AR | 37.94 | 05/26 | 17.23 | 05/01 |
| Greenville, MS | 49.70 | 05/27 | 28.56 | 05/01 |
| Vicksburg, MS | 43.00 | 05/29 | 22.32 | 05/01 |
| Natchez,MS | 49.10 | 05/30 | 29.22 | 05/01 |

*Products issued...*

*Total Flood Warning products issued: 11*
*Total Flood Statement products issued: 106*
*Daily Rainfall Products (RRA'S) issued 31*
*Daily River Forecast Products (RVS'S) issued: 31*
*Daily River Stage products (RVA'S) issued 31*

*Marty V. Pope*
*Service Hydrologist*

*Note: Stage and precipitation data was furnished with cooperation from Mississippi, Louisiana, and Arkansas, N.W.S. Cooperative Observers, United States Geological Survey, United States Army Corps of Engineers and the Pearl River Valley Water Supply District, Pat Harrison Waterway District, and the Mississippi Department of Environmental Quality.*

*cc: USGS Little Rock District*
*USGS Ruston District*
*USCE Mobile District*
*USCE Vicksburg District*
*USCE Mississippi Valley Division*
*USGS Mississippi District*
*SRH Climate, Weather and Water Division*
*LMRFC*
*Pearl River Valley Water Supply District*
*Hydrologic Information Center*
*Southern Region Climate Center*
*Pat Harrison Waterway District*